1. Checking current images (hello-docker and ubuntu are from week 8 docker tutorial) and searching for images

```
seansom@alm MINGW64 ~/OneDrive/Documents/Programming/Repositories/CoE-197-S/ME8_Containerization_and_Docker (201802410_Sombrito_feature_activity01)
$ docker images
REPOSITORY      TAG       IMAGE ID       CREATED        SIZE
hello-docker    latest    5a8b3718878c   6 days ago     113MB
ubuntu          latest    7e0aa2d69a15   2 weeks ago    72.7MB

seansom@alm MINGW64 ~/OneDrive/Documents/Programming/Repositories/CoE-197-S/ME8_Containerization_and_Docker (201802410_Sombrito_feature_activity01)
$ docker search ubuntu
NAME                                             DESCRIPTION                                        STARS   OFFICIAL   AUTOMATED
ubuntu                                           Ubuntu is a Debian-based Linux operating sys...    12221   [OK]
dorowu/ubuntu-desktop-lxde-vnc                   Docker image to provide HTML5 VNC interface ...    528                [OK]
websphere-liberty                                WebSphere Liberty multi-architecture images ...    270     [OK]
rastasheep/ubuntu-sshd                           Dockerized SSH service, built on top of offi...    251                [OK]
consol/ubuntu-xfce-vnc                           Ubuntu container with "headless" VNC session...    240                [OK]
ubuntu-upstart                                   Upstart is an event-based replacement for th...    110     [OK]
neurodebian                                      NeuroDebian provides neuroscience research s...    81      [OK]
1and1internet/ubuntu-16-nginx-php-phpmyadmin-mysql-5   ubuntu-16-nginx-php-phpmyadmin-mysql-5       50                 [OK]
ubuntu-debootstrap                               debootstrap --variant=minbase --components=m...    44      [OK]
open-liberty                                     Open Liberty multi-architecture images based...    44      [OK]
i386/ubuntu                                      Ubuntu is a Debian-based Linux operating sys...    25
nuagebec/ubuntu                                  Simple always updated Ubuntu docker images w...    24                 [OK]
1and1internet/ubuntu-16-apache-php-5.6           ubuntu-16-apache-php-5.6                            14                 [OK]
1and1internet/ubuntu-16-apache-php-7.0           ubuntu-16-apache-php-7.0                            13                 [OK]
1and1internet/ubuntu-16-nginx-php-phpmyadmin-mariadb-10   ubuntu-16-nginx-php-phpmyadmin-mariadb-10   11                [OK]
1and1internet/ubuntu-16-nginx-php-5.6-wordpress-4   ubuntu-16-nginx-php-5.6-wordpress-4             9                  [OK]
1and1internet/ubuntu-16-nginx-php-5.6            ubuntu-16-nginx-php-5.6                             8                  [OK]
darksheer/ubuntu                                 Base Ubuntu Image -- Updated hourly                 5                  [OK]
1and1internet/ubuntu-16-nginx-php-7.0            ubuntu-16-nginx-php-7.0                             4                  [OK]
pivotaldata/ubuntu                               A quick freshening-up of the base Ubuntu doc...    4
1and1internet/ubuntu-16-nginx-php-7.1-wordpress-4   ubuntu-16-nginx-php-7.1-wordpress-4             3                  [OK]
```

2. Pulling and removing images

```
seansom@alm MINGW64 ~/OneDrive/Documents/Programming/Repositories/CoE-197-S/ME8_Containerization_and_Docker (201802410_Sombrito_feature_activity01)
$ docker pull ubuntu:16.10
16.10: Pulling from library/ubuntu
dca7be20e546: Pull complete
40bca54f5968: Pull complete
61464f23390e: Pull complete
d99f0bcd5dc8: Pull complete
120db6f90955: Pull complete
Digest: sha256:8dc9652808dc091400d7d5983949043a9f9c7132b15c14814275d25f94bca18a
Status: Downloaded newer image for ubuntu:16.10
docker.io/library/ubuntu:16.10

seansom@alm MINGW64 ~/OneDrive/Documents/Programming/Repositories/CoE-197-S/ME8_Containerization_and_Docker (201802410_Sombrito_feature_activity01)
$ docker images
REPOSITORY      TAG       IMAGE ID       CREATED        SIZE
hello-docker    latest    5a8b3718878c   6 days ago     113MB
ubuntu          16.04     aefd7f02ae24   2 weeks ago    134MB
ubuntu          latest    7e0aa2d69a15   2 weeks ago    72.7MB
ubuntu          16.10     7d3f705d307c   3 years ago    107MB

seansom@alm MINGW64 ~/OneDrive/Documents/Programming/Repositories/CoE-197-S/ME8_Containerization_and_Docker (201802410_Sombrito_feature_activity01)
$ docker rmi 7d3f705d307c
Untagged: ubuntu:16.10
Untagged: ubuntu@sha256:8dc9652808dc091400d7d5983949043a9f9c7132b15c14814275d25f94bca18a
Deleted: sha256:7d3f705d307c7c225398e04d4c4f8512f64eb8a65959a1fb4514dfde18a047e7
Deleted: sha256:d9db289b9342d9617596cd6ee3bba988629e24d9afa5db4e4b0e4e491c65007d
Deleted: sha256:a87725e8597b97f2399bc3aa50b0e2eec903b8ce19055668d3befb012918205c
Deleted: sha256:38cf10a2801529348366953e9b933d3524360dedc91d3e4d5d7f941da0c973c9
Deleted: sha256:61172966249d43026dbd017eec3a9575e37bddf8a269a9f09ecb559d7bfe7fef
Deleted: sha256:57145c01eb80040fdd0a24cde20af4788605b49593188d4f7efab099af89a08e

seansom@alm MINGW64 ~/OneDrive/Documents/Programming/Repositories/CoE-197-S/ME8_Containerization_and_Docker (201802410_Sombrito_feature_activity01)
$ docker images
REPOSITORY      TAG       IMAGE ID       CREATED        SIZE
hello-docker    latest    5a8b3718878c   6 days ago     113MB
ubuntu          16.04     aefd7f02ae24   2 weeks ago    134MB
ubuntu          latest    7e0aa2d69a15   2 weeks ago    72.7MB
```

3. Running and listing containers

```
seansom@alm MINGW64 ~/OneDrive/Documents/Programming/Repositories/CoE-197-S/ME8_Containerization_and_Docker (201802410_Sombrito_feature_activity01)
$ docker run ubuntu:16.04

seansom@alm MINGW64 ~/OneDrive/Documents/Programming/Repositories/CoE-197-S/ME8_Containerization_and_Docker (201802410_Sombrito_feature_activity01)
$ docker run ubuntu:16.04 ./bin/echo 'Hello world!'
Hello world!

seansom@alm MINGW64 ~/OneDrive/Documents/Programming/Repositories/CoE-197-S/ME8_Containerization_and_Docker (201802410_Sombrito_feature_activity01)
$ docker ps
CONTAINER ID   IMAGE     COMMAND       CREATED      STATUS      PORTS      NAMES
0bb5208acdc6   ubuntu    "/bin/bash"   6 days ago   Up 6 days              adoring_lovelace
186b1590804e   ubuntu    "/bin/bash"   6 days ago   Up 6 days              peaceful_dubinsky

seansom@alm MINGW64 ~/OneDrive/Documents/Programming/Repositories/CoE-197-S/ME8_Containerization_and_Docker (201802410_Sombrito_feature_activity01)
$ docker ps -a
CONTAINER ID   IMAGE          COMMAND                  CREATED             STATUS                     PORTS      NAMES
305b734f75e6   ubuntu:16.04   "./bin/echo 'Hello w…"   About a minute ago  Exited (0) About a minute ago         naughty_northcutt
e607d4dabad9   ubuntu:16.04   "/bin/bash"              About a minute ago  Exited (0) About a minute ago         awesome_feistel
f56fa5d3eace   ubuntu:16.04   "C:/Program Files/Gi…"   About a minute ago  Created                               stupefied_proskuriakova
4d29f6fc2f6d   ubuntu:16.04   "C:/Program Files/Gi…"   2 minutes ago       Created                               gallant_chaum
0bb5208acdc6   ubuntu         "/bin/bash"              6 days ago          Up 6 days                             adoring_lovelace
186b1590804e   ubuntu         "/bin/bash"              6 days ago          Up 6 days                             peaceful_dubinsky
31e7b4ec0e95   ubuntu         "/bin/bash"              6 days ago          Exited (0) 6 days ago                 epic_wiles
70b22f2a3c19   ubuntu         "/bin/bash"              6 days ago          Exited (0) 6 days ago                 recursing_lalande
4a64704eb88f   hello-docker   "docker-entrypoint.s…"   6 days ago          Exited (0) 6 days ago                 condescending_williams
```

```
seansom@alm MINGW64 ~/OneDrive/Documents/Programming/Repositories/CoE-197-S/ME8_Containerization_and_Docker (201802410_Sombrito_feature_activity01)
$ docker run -it ubuntu:16.04 ./bin/bash
root@1714caa90f45:/# pwd
/
root@1714caa90f45:/# ls
bin  boot  dev  etc  home  lib  lib64  media  mnt  opt  proc  root  run  sbin  srv  sys  tmp  usr  var
root@1714caa90f45:/# exit
exit

seansom@alm MINGW64 ~/OneDrive/Documents/Programming/Repositories/CoE-197-S/ME8_Containerization_and_Docker (201802410_Sombrito_feature_activity01)
$ docker run -d ubuntu:16.04 ./bin/sleep 3600
ed03149978ab428a0eefea152fad0096d863cb05bb67d1803d4fe91cd340d83e

seansom@alm MINGW64 ~/OneDrive/Documents/Programming/Repositories/CoE-197-S/ME8_Containerization_and_Docker (201802410_Sombrito_feature_activity01)
$ docker ps
CONTAINER ID   IMAGE          COMMAND             CREATED        STATUS         PORTS      NAMES
ed03149978ab   ubuntu:16.04   "./bin/sleep 3600"  7 seconds ago  Up 6 seconds              jovial_euler
0bb5208acdc6   ubuntu         "/bin/bash"         6 days ago     Up 6 days                 adoring_lovelace
186b1590804e   ubuntu         "/bin/bash"         6 days ago     Up 6 days                 peaceful_dubinsky
```

4. Reattaching, stopping, and killing containers

```
seansom@alm MINGW64 ~/OneDrive/Documents/Programming/Repositories/CoE-197-S/ME8_Containerization_and_Docker (201802410_Sombrito_feature_activity01)
$ docker exec -it ed0 ./bin/bash
root@ed03149978ab:/# pas aux
bash: pas: command not found
root@ed03149978ab:/# ps aux
USER       PID %CPU %MEM    VSZ   RSS TTY      STAT START   TIME COMMAND
root         1  0.0  0.0   4372   656 ?        Ss   19:56   0:00 ./bin/sleep 3600
root        13  0.0  0.0  18232  3308 pts/0    Ss   19:59   0:00 ./bin/bash
root        25  0.0  0.0  34420  2852 pts/0    R+   19:59   0:00 ps aux
root@ed03149978ab:/# exit
exit

seansom@alm MINGW64 ~/OneDrive/Documents/Programming/Repositories/CoE-197-S/ME8_Containerization_and_Docker (201802410_Sombrito_feature_activity01)
$ docker ps
CONTAINER ID   IMAGE          COMMAND             CREATED         STATUS         PORTS      NAMES
ed03149978ab   ubuntu:16.04   "./bin/sleep 3600"  4 minutes ago   Up 4 minutes              jovial_euler
0bb5208acdc6   ubuntu         "/bin/bash"         6 days ago      Up 6 days                 adoring_lovelace
186b1590804e   ubuntu         "/bin/bash"         6 days ago      Up 6 days                 peaceful_dubinsky

seansom@alm MINGW64 ~/OneDrive/Documents/Programming/Repositories/CoE-197-S/ME8_Containerization_and_Docker (201802410_Sombrito_feature_activity01)
$ docker stop ed0
ed0

seansom@alm MINGW64 ~/OneDrive/Documents/Programming/Repositories/CoE-197-S/ME8_Containerization_and_Docker (201802410_Sombrito_feature_activity01)
$ docker kill 0bb
0bb
```

5. Removing containers

```
seansom@alm MINGW64 ~/OneDrive/Documents/Programming/Repositories/CoE-197-S/ME8_Containerization_and_Docker (201802410_Sombrito_feature_activity01)
$ docker ps -a
CONTAINER ID   IMAGE          COMMAND                 CREATED          STATUS                      PORTS     NAMES
dfdf647b7c38   ubuntu         "C:/Program Files/Gi…"  7 minutes ago    Created                               goofy_bhaskara
82a214c6e262   ubuntu:16.04   "C:/Program Files/Gi…"  7 minutes ago    Created                               stupefied_hopper
ed03149978ab   ubuntu:16.04   "./bin/sleep 3600"      7 minutes ago    Exited (137) 2 minutes ago            jovial_euler
1714caa90f45   ubuntu:16.04   "./bin/bash"            9 minutes ago    Exited (0) 8 minutes ago              flamboyant_lehmann
2a21ebcc7952   ubuntu:16.04   "./bin/bash"            10 minutes ago   Exited (0) 10 minutes ago             epic_merkle
a45a49aa6fb1   ubuntu:16.04   "C:/Program Files/Gi…"  10 minutes ago   Created                               strange_euler
305b734f75e6   ubuntu:16.04   "./bin/echo 'Hello w…"  13 minutes ago   Exited (0) 13 minutes ago             naughty_northcutt
e607d4dabad9   ubuntu:16.04   "/bin/bash"             14 minutes ago   Exited (0) 14 minutes ago             awesome_feistel
f56fa5d3eace   ubuntu:16.04   "C:/Program Files/Gi…"  14 minutes ago   Created                               stupefied_proskuriakova
4d29f6fc2f6d   ubuntu:16.04   "C:/Program Files/Gi…"  14 minutes ago   Created                               gallant_chaum
0bb5208acdc6   ubuntu         "/bin/bash"             6 days ago       Exited (137) 2 minutes ago            adoring_lovelace
186b1590804e   ubuntu         "/bin/bash"             6 days ago       Exited (137) About a minute ago       peaceful_dubinsky
31e7b4ec0e95   ubuntu         "/bin/bash"             6 days ago       Exited (0) 6 days ago                 epic_wiles
70b22f2a3c19   ubuntu         "/bin/bash"             6 days ago       Exited (0) 6 days ago                 recursing_lalande
4a64704eb88f   hello-docker   "docker-entrypoint.s…"  6 days ago       Exited (0) 6 days ago                 condescending_williams

seansom@alm MINGW64 ~/OneDrive/Documents/Programming/Repositories/CoE-197-S/ME8_Containerization_and_Docker (201802410_Sombrito_feature_activity01)
$ docker rm $(docker ps -a -q)
dfdf647b7c38
82a214c6e262
ed03149978ab
1714caa90f45
2a21ebcc7952
a45a49aa6fb1
305b734f75e6
e607d4dabad9
f56fa5d3eace
4d29f6fc2f6d
0bb5208acdc6
186b1590804e
```